

ABSTRACT OF THE DISCLOSURE

A highly automated non-confining system to continuously, or at selected time intervals identify, measure, monitor and manage the consumption behavior, substance intake, body weight and growth of individual animals in their usual production environment including range, pasture, feedlot, dairy and farm without disruption to typical behaviors in order to determine, analyze, model and predict a variety of conditions relating to animal health, productivity, efficiency and quality. A transmitter generally attached to the animal identifies the individual animal by a unique individual code. A weighing device measures animal weight while an animal is consuming substances. An antenna receives the unique signal from the transmitter and a transmitting and receiving device sends acquired signals to a computer and receives instructions from a computer. A computer acquires signals and modification factors incorporated in the computer generate an event or interval measurement of an animal's weight and gain, growth rate and substance consumption, and the animal behavior affecting the measurement. A visual identification mechanism marks cattle that the computer system has determined require intervention. The system models and predicts animal health and growth, performance, carcass characteristics, feed utilization, manure and methane output.